

Preliminary Amendment of U.S. National Stage for International Application PCT/EP2004/004591 filed April 30, 2004

In the Claims:

Please cancel claims 1-11 without prejudice, and add new claims 12-30, in accordance with the following complete listing of all claims ever presented. This listing of claims replaces all prior versions, and listings, of the claims in the instant application:

Listing of Claims:

Claims 1-11 (Canceled)

12. (New): A starter system for the polymerization of unsaturated monomers in nonaqueous media which comprises:
 - a) 0.02% to 7% by weight of a peroxide compound;
 - b) 0.005% to 3% by weight of an organic hydrazine derivative; and
 - c) 1 to 1,000 parts per million (ppm) of a transition metal ion;wherein, the concentrations are based on a polymerization mixture as a whole including monomers, nonaqueous medium and starter system.
13. (New): The starter system as claimed in claim 17, wherein, the peroxide compound comprises at least one member selected from the group consisting of methylethylketone peroxide and cumene hydroperoxide.
14. (New): The starter system as claimed in claim 12, wherein, component a) is present in an amount of 0.1 to 1% by weight of the polymerization mixture.
15. (New): The starter system as claimed in claim 12, wherein, component b) comprises at least one member selected from the group consisting of acetylphenyl hydrazide and toluenesulfonic acid hydrazide.
16. (New): The starter system as claimed in claim 12, wherein, component b) is present in an amount of 0.03 to 0.3% by weight of the polymerization mixture.

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17. (New): The starter system as claimed in claim 12, wherein, component c) comprises ions of at least one metal selected from the group consisting of copper, vanadium, molybdenum, cobalt and iron.
18. (New): The starter system as claimed in claim 12, wherein, component c) comprises copper ions.
19. (New): The starter system as claimed in claim 12, wherein, the nonaqueous solvent comprises at least one aromatic hydrocarbon.
20. (New): The starter system as claimed in claim 12, wherein, the unsaturated monomers comprise at least one member selected from the group consisting of acrylic acid, methacrylic acid and derivatives thereof.
21. (New): A process for the polymerization of unsaturated monomers, which comprises:
 - a) dissolving the monomer in a nonaqueous solvent to form a polymerizable mixture;
 - b) heating the polymerizable mixture to a temperature below 80°C;
 - c) adding the starter system claimed in claim 12 to the heated polymerizable mixture, whereby, the polymerization is started.
22. (New): The method of starting polymerization reactions of unsaturated monomers in nonaqueous solvents which comprises: introducing the starter mixture of claim 12 into a mixture of the unsaturated monomers in the nonaqueous solvent.
23. (New): The starter system of claim 12, wherein, component c) is present in an amount of from 3 to 15 ppm.

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24. (New): The starter system of claim 13, wherein, component a) is present in an amount of 0.1 to 1% by weight of the polymerization mixture.
25. (New): The starter system of claim 13, wherein, component b) comprises at least one member selected from the group consisting of acetylphenyl hydrazide and toluenesulfonic acid hydrazide.
26. (New): The starter system of claim 13, wherein, component b) is present in an amount of 0.03 to 0.3% by weight of the polymerization mixture.
27. (New): The starter system of claim 13, wherein, component c) comprises ions of at least one metal selected from the group consisting of copper, vanadium, molybdenum, cobalt and iron.
28. (New): The starter system of claim 20, wherein, the nonaqueous solvent comprises at least one member selected from the group consisting of toluene and xylene.
29. (New): The process of claim 21, wherein, the polymerizable mixture is heated to a temperature below 70°C.
30. (New): The process of claim 21, wherein, the monomers comprise at least one member selected from the group consisting of acrylic monomers, methacrylic monomers, acrylate monomers, methacrylate monomers and styrene.